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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,926	12/19/2001	Lan Chen	217392US2	8879

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ALEXANDRIA, VA 22314

EXAMINER

PAN, YUWEN

ART UNIT	PAPER NUMBER
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2682

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/020,926	CHEN ET AL.	
	Examiner	Art Unit	
	Yuwen Pan	2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,23-30 and 32-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,23-30 and 32-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments with respect to claim 21 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues that prior art of record, Cerwall et al and Bhatia et al, are combined, the combination does not teach the claimed feature of allocating based on the priority information related to the base station of concern and the priority information relating to neighboring base station. The examiner respectfully disagrees because Cerwall discloses causing the base station to determine which candidate channel to allocate to the connection is made based the information is collected by the interference impact statistical database (this database should collect all the assigned or unassigned channel information in the network and among all the cells) in which pass on to interference supervisor, session quality supervisor and radio resource administrator to determine whether the candidate channel is assignable or not (see figure 3, items 300, 310, 320, and 330, figure 4b, column 9 and lines 16-49, column 10 and lines 26-column 11 and line 10). Cerwall doesn't teach the steps of determine whether a level of priority of the requesting mobile station is higher than a level of priority of each of the mobile stations. Bhatia discloses the steps of determining whether a level of priority of the requesting mobile station is higher than a level of priority of each of the mobile stations (see column 2 and lines 38-64). It would have been obvious to one ordinary skill in the art at the time the invention was made to combine the teaching of Bhatia with Cerwall's system such that the channel allocation would be optimized and less cross channel interference among adjacent cells would be minimized while a channel is going to be allocated to a mobile station. See the detailed action below.

DETAILED ACTION

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 21, 23-30, and 32-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cerwall (US006868277B1) in view of Bhatia et al (US006112101A).

Per claim 21 and 30, Cerwall discloses a resource allocation method for a base station to allocate a new radio resource to a link between the base station and a requesting mobile station in a cell site of the base station (figure 1), comprising the steps of: causing the base station to detect use-state information of radio resources in the cell site of the base station of concern and in respective cell sites of neighboring base stations and priority information of mobile stations using the same radio resource of both the base station of concern and neighboring base stations by accessing an external radio resource management table (see figure 4b, column 9 and line 58-column 11 and line 10);

causing the base station to determine whether an up/down link data transmission related to the non-allocated radio resource in the cell site of the base station of concern is the same as a direction of link data transmission related to an allocated radio resource in one of the cell sites of the neighboring base stations(column 2 and lines 17-28); and causing the base station to allocate a new radio resource to the link between the base station of concern and the requesting mobile

station based on both the use-state information and the priority information in said detecting step and a result of the determination in said determining step(column 2 and lines 45-58),

causing the base station to determine which candidate channel to allocate to the connection is made based the information is collected by the interference impact statistical database (this database should collect all the assigned or unassigned channel information in the network and among all the cells) in which pass on to interference supervisor, session quality supervisor and radio resource administrator to determine whether the candidate channel is assignable or not (see figure 3, items 300, 310, 320, and 330, figure 4b, column 9 and lines 16-49, column 10 and lines 26-column 11 and line 10).

Cerwall doesn't teach the steps of determine whether a level of priority of the requesting mobile station is higher than a level of priority of each of the mobile stations. Bhatia discloses the steps of determining whether a level of priority of the requesting mobile station is higher than a level of priority of each of the mobile stations (see column 2 and lines 38-64). It would have been obvious to one ordinary skill in the art at the time the invention was made to combine the teaching of Bhatia with Cerwall's system such that the channel allocation would be optimized and less cross channel interference among adjacent cells would be minimized while a channel is going to be allocated to a mobile station.

Per claims 23 and 32, Bhatia further teaches that a radio network controller maintains a radio resource management table, and, in said detecting step, the base station of concern detects the use-state information and the priority information from the radio resource management table

Art Unit: 2682

of the radio network controller by sending an inquiry from the base station of concern to the radio network controller (see figure 3 and 4, column 4 and lines 9-55).

Per claims 24 and 33, Bhatia further teaches that a radio network controller maintains a radio resource management table, and, when the radio resource allocation and radio resource releasing are performed, the base station of concern transmits a radio resource notification to the radio network controller so that the radio resource management table is updated (see column 4 and lines 23-33).

Per claims 25, 26 and 34, 35, Bhatia further teaches that each of the base station of concern and the neighboring base stations maintains the use-state information of that base station and the priority information of the mobile stations related to that base station, and, in said detecting step, the base station of concern detects the use-state information and the priority information from the respective neighboring base stations by sending an inquiry from the base station of concern to each of the respective neighboring base stations, when transmitting the inquiry the use-station information or the priority information between the base station of concern and each of the neighboring base stations, a dedicated radio channel is used as a path of the data transmission (see figure 3 and 4 and column 4 and lines 9-41).

Per claims 27, 28 and 36, 37, Bhatia further teaches that wherein each of the base station of concern and the neighboring base stations maintains the use-state information of that base station and the priority information of the mobile stations related to that base station, and, when

Art Unit: 2682

an inquiry from one of the neighboring base stations is received at the base station of concern, the base station of concern transmits to said one of the neighboring base stations the use-state information and the priority information both related to the base station of concern, when transmitting the use-station information or the priority information between the base station of concern and said one of the neighboring base stations, a dedicated radio channel is used as a path of the data transmission (see figure 3 and 4 and column 4 and lines 9-41).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

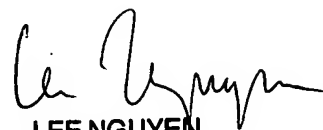
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuwen Pan whose telephone number is 571-272-7855. The examiner can normally be reached on 8-5 M-F.

Art Unit: 2682

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Yuwen Pan
February 13, 2006


LEE NGUYEN
PRIMARY EXAMINER